

Write your name here

Surname

Other names

Edexcel
Functional Skills

Centre Number

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Candidate Number

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Mathematics

Level 1



14–18 February 2011

Time: 1 hour 30 minutes

Paper Reference

FSM01/01

You must have:

Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm, protractor, compasses.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- **Calculators may be used.**

Information

- The total mark for this paper is 48.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*
- **Where you see this sign you must show clearly how you get your answers because marks will be awarded for your working out.**



Advice

- Read each question carefully before you start to answer it.
- Show all stages in the calculations.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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SECTION A: Battle of the Bands

Answer all questions in this section.

Write your answers in the spaces provided.

- 1 A youth club holds a Battle of the Bands event.
Shazad will organise the event.

The youth club members pick **one** music style from **each** of three categories:

Punk **or** Jazz

Garage **or** House

Rock **or** Blues

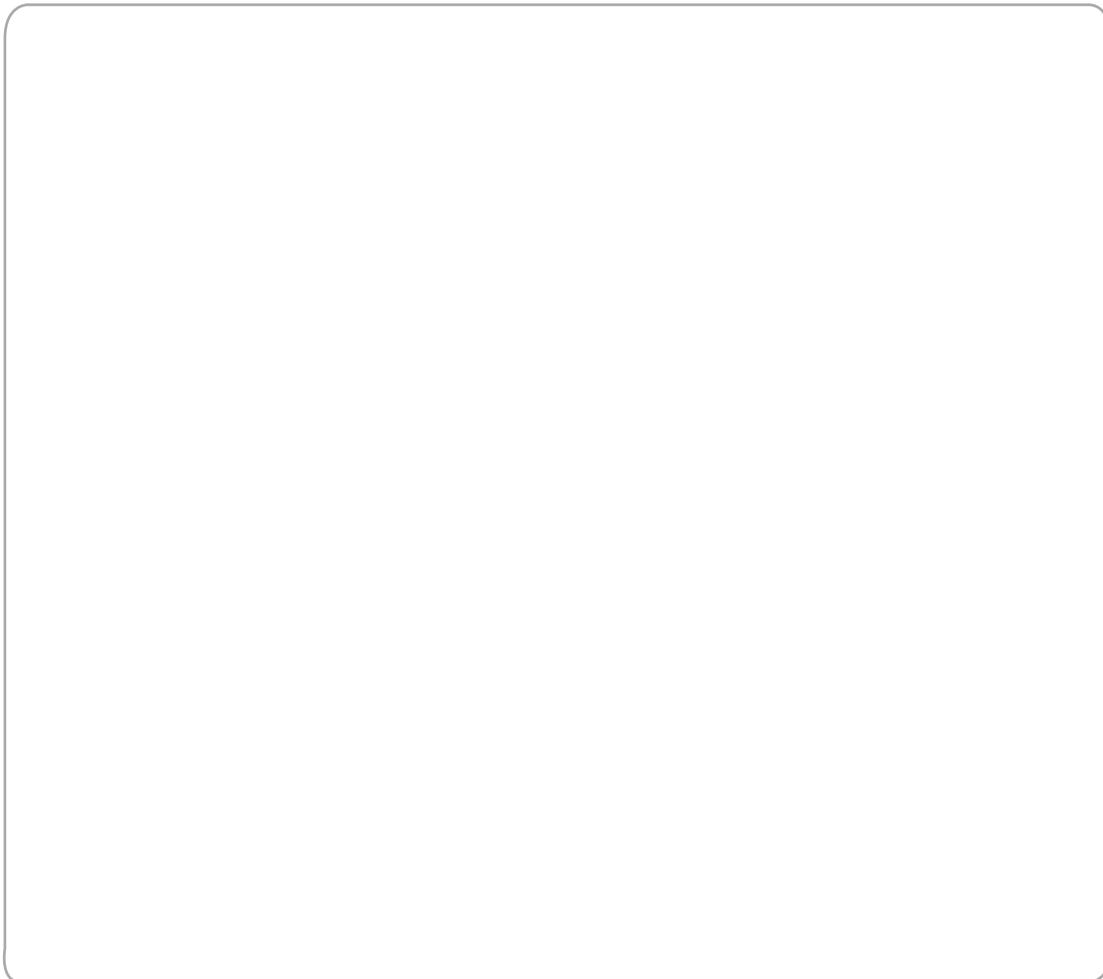
The ticket price could be £6, £12 or £18

Shazad needs a data collection sheet to record the choices of the youth club members.

Design a data collection sheet to record the choice of music style and ticket price.

(3)

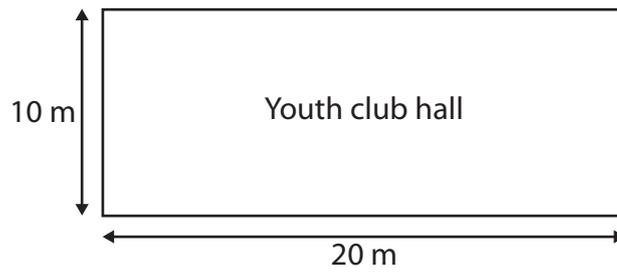
Use the box below to show clearly your data collection sheet.



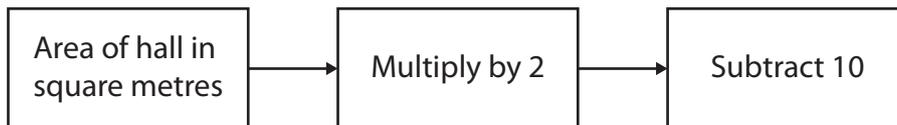
(Total for Question 1 is 3 marks)



2 The Battle of the Bands will be in the youth club hall.



Shazad uses this rule to find the number of people allowed in the hall.



The hall is 20 m long and 10 m wide.

What is the number of people allowed in the youth club hall?

(4)

Use the box below to show your calculations.



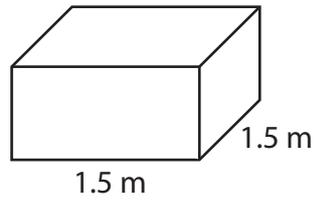
A large empty rectangular box for showing calculations.

(Total for Question 2 is 4 marks)



3 The stage for the bands will be made of blocks.

Each block is 1.5 m long and 1.5 m wide.



10 blocks will be used. The blocks cannot be placed on top of each other.

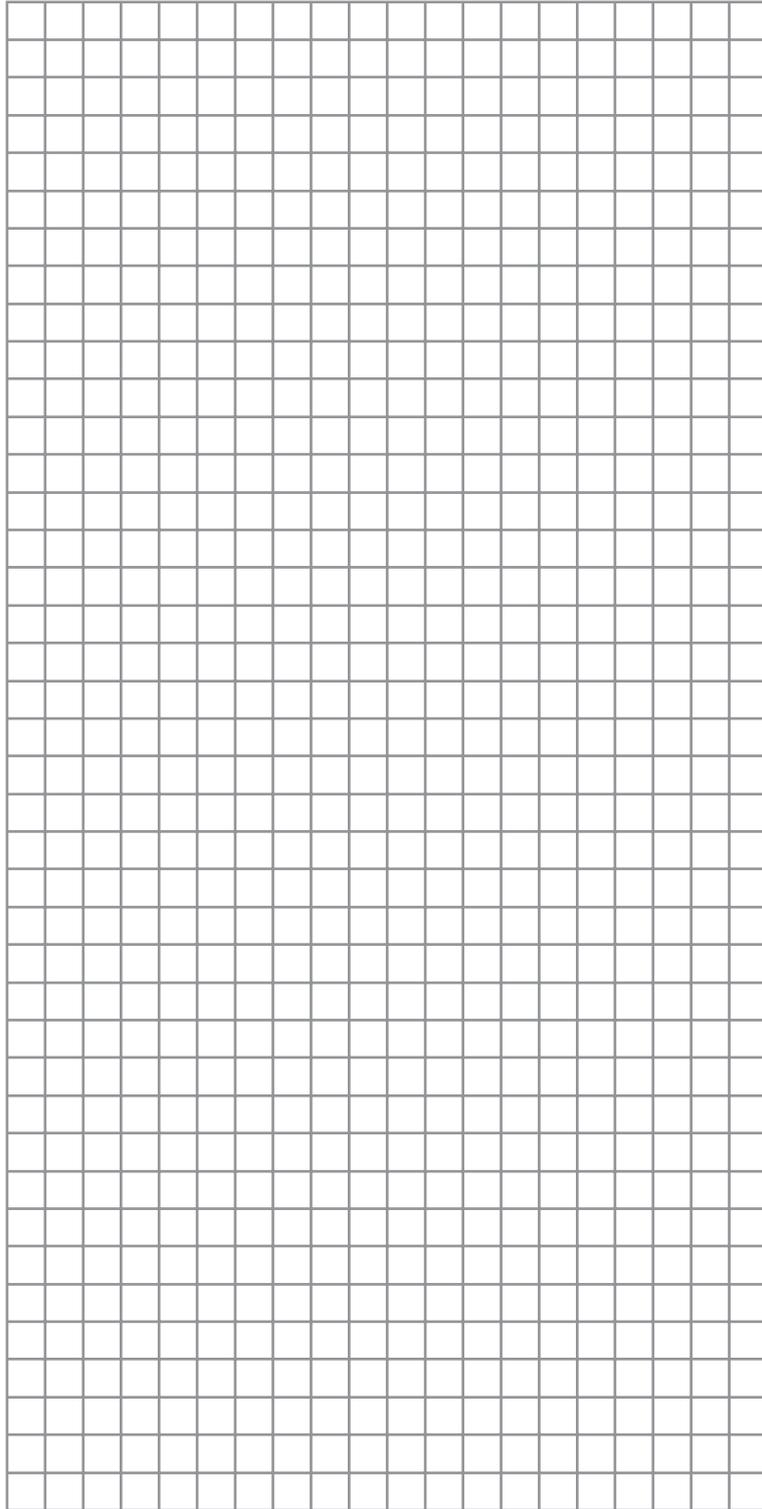
The stage can be a rectangle, an 'L' shape or a 'T' shape.

Design a stage for Shazad using the blocks.

(3)



Show your design on Shazad's plan below.



Key: 1 cm on the plan = 1 m in the hall

(Total for Question 3 is 3 marks)



- 4 Shazad needs to work out the costs for the Battle of the Bands event.
The event must not make a loss.

The hire charge for the hall is **£6.50** per hour or part of an hour.

The event will take place from **1930** to **2300**

The hall is also needed from **1800** to **1930** to set up the staging and refreshments.

(a) For how many hours does Shazad need to hire the hall?

(1)

Write your answer in the box below.

(b) Work out the total **cost** for hiring the hall.

(2)

Use the box below to show your working.



The total costs of the event are:

- hire of the hall
- refreshments £320
- printing tickets £17.50
- sound equipment £250

The price of a ticket is £6

The event must not make a loss.

Shazad needs to know how many tickets he must sell.

(c) What is the smallest number of tickets Shazad must sell?

(3)

Use the box below to show your calculations and decision.



Large empty box for calculations and decision.

(Total for Question 4 is 6 marks)



SECTION B: Auto Pitstop

Answer all questions in this section.

Write your answers in the spaces provided.

5 Andy services and repairs cars at the Auto Pitstop garage.

He uses 4 litres of oil for each full service.

He uses 5 litres of oil each day for other jobs in the garage.

On Thursday, 3 cars have a full service.

(a) What is the **total** amount of oil needed on Thursday?

(2)

Use the box below to show your working.



(b) Show how you can check your answer in the box below.

(1)



Andy wants to buy 20 litres of oil.
He compares prices before he buys the oil.

Autoparts

1 litre oil £8

Buy 4 litres get 1 litre **free**

Motorsparses

1 litre oil £9

Buy 5 litres for £35

(c) Which is the cheaper for 20 litres?

(3)

Use the box below to show clearly how you get your answer.



(Total for Question 5 is 6 marks)



6 Callum wants Andy to carry out a full service on his car.

The full service will take 2 hours.

Andy must finish the work for Callum by 14:00

(a) Show on the diary sheet below the day and time Callum could choose for the full service. (2)

Diary for Andy at the Auto Pitstop Garage

Start time	Monday	Tuesday	Wednesday	Thursday	Friday
08:00	service	full service	MOT	MOT	service
09:00	full service	full service		full service	MOT
10:00	full service	MOT		full service	
11:00	service		MOT		
12:00	LUNCH BREAK				
13:00		service	full service		MOT
14:00			full service	full service	
15:00	MOT	service	MOT	full service	

Jean also services cars at the Auto Pitstop garage.

Diary for Jean at the Auto Pitstop Garage

Start time	Monday	Tuesday	Wednesday	Thursday	Friday
09:00		service	service		service
10:00				service	
11:00	service		service	service	full service
12:00	LUNCH BREAK				
13:00	full service	service			full service
14:00	full service			full service	
15:00	service	service	service	full service	full service
16:00	service	service			full service



(b) Complete the table below to record the hours for Andy and Jean for the week.

(2)

Auto Pitstop Garage						
Name	Record of hours worked					Total hours worked
	Monday	Tuesday	Wednesday	Thursday	Friday	
Andy						
Jean						

Use the box below for your working.

(c) Compare Andy and Jean's working hours for the week.

(2)

Write your comments in the box below.



Andy wants to go on holiday.

His manager wants him to go when the garage is not busy.

The table shows the hours Andy and Jean worked last summer.

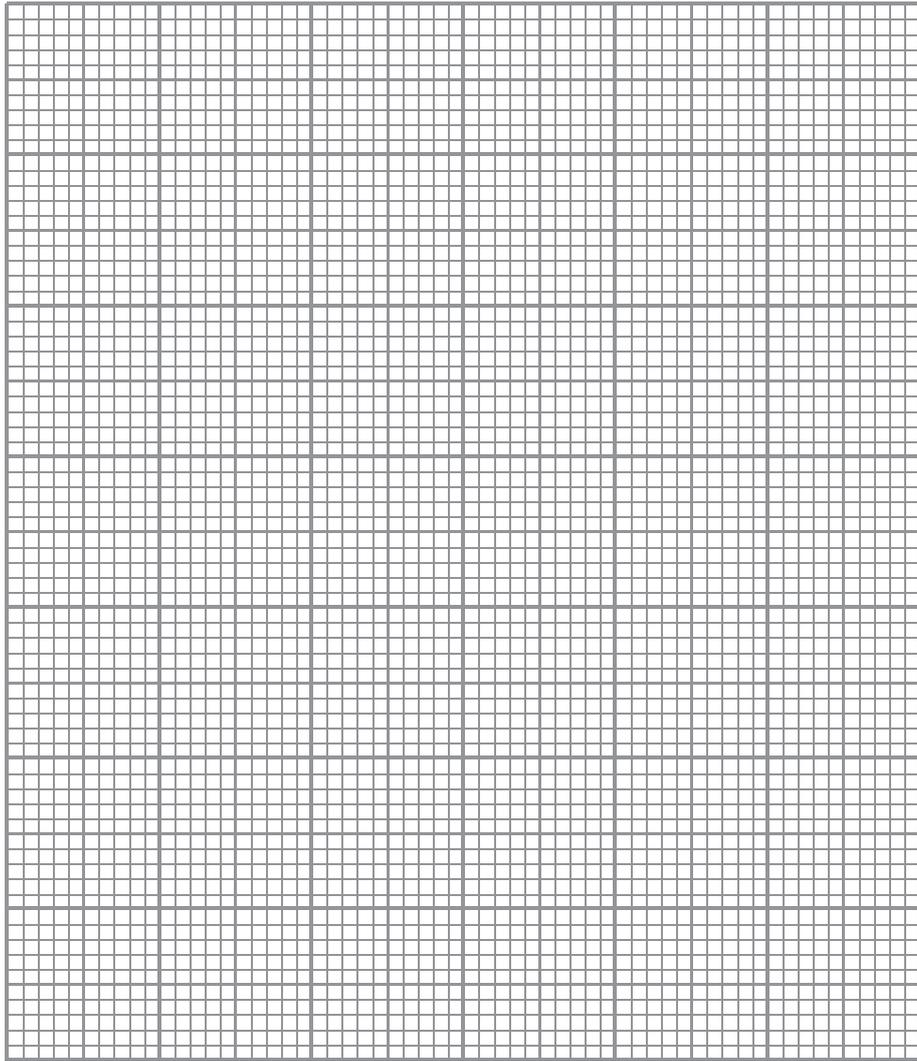
Name	Record of total hours worked				
	May	June	July	August	September
Andy	110	90	120	80	110
Jean	100	80	90	70	100

The manager asks Andy to show the information on a graph or chart.

(d) Draw a graph or chart to show the information.

(4)





(Total for Question 6 is 10 marks)



SECTION C: Pamper Party

Answer all questions in this section.

Write your answers in the spaces provided.

7 Nikki is booking a pamper party for her friend Jade.

Treatments	Cost
Facial	£15
Pedicure	£15
Manicure	£15
Foot massage	£15
Hand massage	£8
Eyebrow shape	£6
Eyelash tint	£11
Leg wax	£13

Special offer: 2 treatments for £25
3 treatments for £35

Nikki will pay for Jade's treatments as well as her own.

She has a total of £50 to spend.

Jade wants a manicure.

Nikki wants an eyelash tint.

Nikki wants to book as many treatments as she can for her £50

Work out the treatments that Nikki can book.
Show the costs of these treatments.

(4)



Use the box below to show clearly how you get your answer.



A large, empty rectangular box with rounded corners, intended for the student to show their working out.

(Total for Question 7 is 4 marks)



- 8 Raksha and Ali give treatments at pamper parties. They are planning a pamper party at a college.

The party will start at 7 pm and finish at 9:30 pm. There will be a half hour break for refreshments.

Pamper Party Booking Form			
Day of party: Tuesday		Start time: 7 pm	
Name: Newton College			
Address: Victoria Street, Newton			
Treatments	Cost	Time (minutes)	Number of Treatments
Facial	£15	20	1
Pedicure	£15	20	4
Manicure	£15	20	2
Foot massage	£15	20	0
Hand massage	£8	10	0
Eyebrow shape	£6	10	3
Eyelash tint	£11	15	2
Leg wax	£13	30	0

Make a timetable for the treatments for this party. Show the times for Raksha, for Ali and for the break.

(5)



Use the box below to show your answer.

(Total for Question 8 is 5 marks)



9 Ali needs to submit a claim form for a different pamper party.

Claim form Complete all totals		
Reason for claim	Details	Total
Car travel	20 miles at 28p per mile	£
Hand cream	£1.70	£ <u>1.70</u>
2 packets waxing strips	£5.80 per packet	£
Massage oil	1 bottle lavender £3.20 1 bottle peppermint £4.20	£
Total claim		£

(a) Complete the claim form for Ali.

(3)

Use the box below for your calculations.



Ali checks the claim form. The price of waxing strips is wrong.

Waxing strips cost £5.60 per packet.

(b) How much less should Ali claim?

(2)

Use the box below to show clearly how you get your answer.



(Total for Question 9 is 5 marks)

10 Raksha needs 500 ml of massage oil.

She mixes 1 part of lavender oil with 4 parts of almond oil to make the massage oil.

How much lavender oil and how much almond oil does Raksha need?

(2)

Use the box below to show your calculations and your answer.



(Total for Question 10 is 2 marks)

TOTAL FOR PAPER = 48 MARKS



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